

1 I CLAIM:

2 1. An improved geographic database that contains data that represent a road  
3 network in a geographic region, wherein the improvement comprises:

4 wireless coverage data associated with said geographic database, wherein said  
5 wireless coverage data indicate areas within the geographic region in which navigation-  
6 related data from a service provider are available wirelessly.

7

8 2. An improved geographic database that contains data that represent a road  
9 network in a geographic region, wherein the improvement comprises:

10 wireless coverage data associated with said geographic database, wherein said  
11 wireless coverage data indicate areas within the geographic region in which navigation-  
12 related data from a service provider are not available wirelessly.

13

14 3. The invention of Claim 1 or 2 wherein said wireless coverage data  
15 comprises attributes associated with data records that represents geographic features  
16 located in said geographic region.

17

18 4. The invention of Claim 3 wherein said geographic features are road  
19 segments.

20

21 5. The invention of Claim 3 wherein said geographic features are postal  
22 codes.

23

24 6. The invention of Claim 3 wherein said geographic features are  
25 administrative boundaries.

26

27 7. The invention of Claim 3 wherein said geographic features are areas  
28 defined by a developer of the geographic database.

29

1           8.     A method of operation for an end user's computing device that provides  
2 navigation-related services to the end user, the method comprising:

3                 with the end user's computing device, establishing a wireless communications  
4 link with a remotely located navigation services provider; and

5                 obtaining wireless coverage data from said remotely located navigation services  
6 provider, wherein said wireless coverage data indicate areas in which navigation-related  
7 data from the navigation services provider are unavailable wirelessly.

8  
9           9.     A method of operation for an end user's computing device that provides  
10 navigation-related services to the end user, the method comprising:

11                with the end user's computing device, establishing a wireless communications  
12 link with a remotely located navigation services provider; and

13                obtaining wireless coverage data from said remotely located navigation services  
14 provider, wherein said wireless coverage data indicate areas in which navigation-related  
15 data from the navigation services provider are available wirelessly.

16  
17           10.    The method of Claim 8 or 9 further comprising:

18                using the wireless coverage data to indicate on a display screen of said end user's  
19 computing device areas in which navigation-related data from the navigation services  
20 provider are available wirelessly.

21  
22           11.    The method of Claim 10 wherein said areas in which navigation-related  
23 data from the navigation services provider are unavailable wirelessly are indicated by  
24 color coding.

25  
26           12.    The method of Claim 10 wherein said areas in which navigation-related  
27 data from the navigation services provider are unavailable wirelessly are indicated by  
28 hatching.

29

1           13.    The method of Claim 10 wherein said areas in which navigation-related  
2 data from the navigation services provider are unavailable wirelessly are indicated by  
3 boundaries.

4

5           14.    The method of Claim 8 or 9 further comprising:  
6           using the wireless coverage data to indicate on a display screen of said end user's  
7 computing device areas in which navigation-related data from the navigation services  
8 provider are available wirelessly.

9

10          15.    The method of Claim 8 or 9 further comprising:  
11          using the wireless coverage data to provide a warning that the end user is leaving  
12 an area in which navigation-related services are available wirelessly.

13

14          16.    The method of Claim 15 wherein the warning is provided audibly.

15

16          17.    The method of Claim 15 wherein the warning is provided visually.

17

18          18.    The method of Claim 9 further comprising:  
19          restricting selection of destinations to those located in said areas in which  
20 navigation-related data from the navigation services provider are available wirelessly.

21

22          19.    The method of Claim 8 or 9 further comprising:  
23          restricting calculation of routes to limit crossing into areas in which navigation-  
24 related data from the navigation services provider are unavailable wirelessly.

25

26          20.    A method of operation for a computing device that provides navigation-  
27 related services to an end user, the method comprising:

28               while the computing device is located in a first area in which navigation-related  
29 data are available wirelessly from a remotely located navigation services provider,  
30 establishing a wireless communications link with the remotely located navigation  
31 services provider; and

1 prior to leaving said first area, downloading data for a second area located outside  
2 said first area, wherein navigation-related data are not available wirelessly from the  
3 remotely located navigation services provider in said second area.

4  
5 21. The method of Claim 20 further comprising:  
6 using said data in said computing device to provide navigation-related services  
7 while said computing device is located in said second area.

8  
9 22. The method of Claim 20 wherein the data for the second area correspond  
10 to a destination to which the end user is traveling and which is located outside said first  
11 area.

12  
13 23. The method of Claim 20 wherein the data for the second area correspond  
14 to a portion of a route on which a vehicle in which the end user is located is traveling,  
15 wherein the portion of the route is located outside the first area.